

Welcome to the Cardiovascular Health Nova Scotia (CVHNS) quarterly e-mail bulletin. The Bulletin has been created to share information about the program's activities, related cardiovascular health initiatives, and ideas from around the province.

## A Stroke of Success in South West Health

In 2005, South West Health (SWH) began to reorganize the way they deliver stroke care as the demonstration district for the province. Stroke care for the whole district is now clustered on one medical unit at Yarmouth Regional Hospital, with bypass and transfer protocols in place for the other two rural hospitals. Stroke patients are cared for by an interdisciplinary stroke team that has processes in place to ensure that patients receive optimal care. After discharge, patients attend an integrated wellness centre in Yarmouth, or mobile secondary prevention in smaller communities, for secondary prevention services.

Cardiovascular Health Nova Scotia (CVHNS) and SWH conducted a follow up chart audit of patients admitted for stroke in the district between October 1, 2006 and September 30, 2007. The results of this audit were compared to a baseline audit conducted by CVHNS for the period of 2004/05. The results show that collaborative reorganization and small system enhancements can have a positive impact on stroke care and outcomes.

The following statistically significant findings were noted following reorganization:

- 13% increase in stroke being admitted to Yarmouth Regional Hospital, resulting in that hospital receiving 90% of the admitted stroke cases for the district
- 27% increase in patients who had their lipid tested during admission
- 12% increase in patients who received carotid imaging during admission
- 25% more patients referred to internal medicine
- 16% more patients seen by physiotherapy
- 17% more patients seen by occupational therapy
- 42% more patients seen by social work
- 21% more patients seen for nutrition assessment
- 16% fewer patients experienced neurological worsening during their admission
- 22% more patients discharged home (of those discharged alive)
- 13% fewer patients discharged to long term care (of those discharged alive)

The following are other notable findings that did not reach statistical significance:

- 8% increase in patients with a Charlson score of greater than one, indicating that patients seen in the post-stroke program year had higher co-morbidity
- 8% decrease in strokes of undetermined type
- 3 hour decrease in median length of time from 'last seen normal' to arrival at emergency department
- 9% increase in patients receiving neuroimaging during their admission
- 9% increase in patients seen by speech language pathology and a 7% increase in patients receiving swallowing assessments
- No change in overall median length of stay
- 1.5 day decrease in length of stay for those patients who had their stroke before being admitted to hospital (as opposed to in-hospital strokes)
- 13% increase in patients discharged with a Rankin Score of less than or equal to 2, indicating no or only slight disability

Organized stroke care in SWH led to more patients being discharged home with less disability. It is expected that other districts will show similar improvements as they reorganize and enhance care in their districts. The full report and a two page summary report will be available shortly from CVHNS.

### *Learning Opportunities*

#### **Nova Scotia Hearing and Speech (NSHSC) Education Modules**

NSHSC has developed education modules for communication (Improving Communication After a Stroke) and for dysphagia (Post-Stroke Dysphagia Monitoring and Follow-up). For more information, please discuss with your local speech language pathologist or contact Susan Wozniak at [swozniak@nshsc.ns.ca](mailto:swozniak@nshsc.ns.ca)

hypertension. These include:

- A hypertension stakeholder forum held in March 2010 (see the forum report at [www.nsrp.gov.ns.ca/?q=ProvincialProgramsPartnerships](http://www.nsrp.gov.ns.ca/?q=ProvincialProgramsPartnerships))
- The "My Blood Pressure Card" initiative is modeled after the successful "Blue Card" project in the Valley Regional Hospital Diabetes Centre that resulted in statistically significant improvements in blood pressure of program participants. The initiative is designed to improve patient and provider awareness of blood pressure values, targets and management. A wallet card, brochure and poster are in development. The card and brochure were pilot tested at various sites (pharmacies, physician practices, diabetes centres, cardiac wellness and renal programs from across the province.) A provincial roll out of this project is planned for early 2011.

### *CVHNS News*

#### **Joint Initiatives with Diabetes Care Program of Nova Scotia and Nova Scotia Renal Program**

##### **Hypertension**

The three provincial programs are engaged in a number of collaborative initiatives related to



- A review of recommendations related to medications in Canadian hypertension guidelines by the Drug Evaluation Unit at Capital Health. This work will help facilitate the development of common messaging across diseases.
- Promotion of the Canadian Hypertension Education Program tools for the public, patients, and providers ([www.hypertension.ca](http://www.hypertension.ca))
- Supporting the policy work of the Department of Health Promotion and Protection.

An ad hoc group will be brought together in the New Year with a short term mandate to provide input into a 3 to 5 year work plan, including performance measures, to guide our collaborative work. Stay tuned!

#### **Integrated Chronic Disease Management**

The programs hosted a small roundtable meeting in July 2010, with representatives chosen by District Health Authorities. The focus of the meeting was roundtable sharing of current work towards a more integrated approach to chronic disease management and feedback on a draft definition and principles to guide integration at multiple levels. Feedback was also sought during the first joint meeting of the Advisory Councils of the 3 programs in July. The definition and guiding principles are being revised, based on feedback, and will be shared with those interested/involved in efforts throughout the province.

#### **Stroke Rehabilitation Forum**

On November 8th, 2010, CVHNS hosted their 5th Sharing and Planning Forum for stroke. The topic of this forum was stroke rehabilitation and Mark Bayley, Medical Director of the Toronto Rehabilitation Institute was our guest speaker for the day. A total of 57 people from all district stroke programs attended the forum, including

front line therapists, managers, physicians and nurses. District Stroke Program groups worked on plans to achieve the best practice recommendations on stroke rehabilitation and presented their plans back to the group using creative and inventive methods! The next stroke forum will be on February 14th—topic and information will be sent out through the stroke coordinators in the upcoming weeks.

#### **District Coordinator Training**

CVHNS has arranged for cardiac and stroke district coordinators to receive training in change management theory and practice to assist them in their roles in facilitating change in cardiovascular care in the district health authorities. A series of workshops (forming a team, interpersonal communication, planning and evaluation) will be offered between December 2010 and April 2011.

#### ***Emergency Health Services Bypass Protocol for Acute Stroke Care—CDHA***

On October 25th, 2010 Capital Health implemented their Emergency Health Services (EHS) bypass protocol for acute stroke. Now, when a patient is picked up by EHS and meets the time criteria for tPA (the clot busting drug), s/he is transported directly to the Halifax Infirmary Emergency Department. If a patient does not meet the criteria for tPA and would normally be transported to Eastern Shore, Twin Oaks or Middle Musquodoboit, s/he is now transferred to Dartmouth General Hospital. If a patient lives in Windsor, Sackville, Bedford or Halifax, s/he will now be seen in the Halifax Infirmary. Patients from the Dartmouth General can be transferred directly to the stroke unit at the Halifax Infirmary when a bed becomes available. The goal is for all stroke patients to receive their acute inpatient care on the stroke unit, according to best practices.



## Helpful Resources

### AHA Scientific Statement: Cardiovascular Risk Factor Reduction

Artinian NT, Fletcher GF, Mozaffarian D, et al. Interventions to promote physical activity and dietary lifestyle changes for cardiovascular risk factor reduction in adults: A scientific statement from the American Heart Association. *Circulation*, July 12, 2010 (Epub ahead of print). PMID: 20625115 (Pub Med).

### NHS: Stroke Competency Series

Stroke Training and Awareness Resources (STARs) offers free online modules for Stroke Core Competencies as well as Advancing Modules. The core competency series covers 19 core competencies of stroke care. Participants complete the module and test and receive a certificate of completion for the course. Visit [www.stroketraining.org](http://www.stroketraining.org).

### Consensus Document on CV Magnetic Resonance

Hundley WG, Bluemke DA, Finn JP et al. ACCF/ACR/AHA/NASCI/SCMR 2010 expert consensus document on cardiovascular magnetic resonance. *J Am Coll Cardiol*. 2010; 55(23): 2614-2662.

### Secondary Prevention Position Paper ESC

Corra U, Piepoli M, Carre F. et al. Secondary prevention through cardiac rehabilitation: Physical activity counselling and exercise training: Key components of the position paper from the Cardiac Rehabilitation Section of the European Association of Cardiovascular Prevention and Rehabilitation. *Eur Heart J*. 2010; 31(16): 1967-1974.

### CCS Launches Guideline Site

CCS has a dedicated portal for information and resources to support practitioners in putting guideline recommendations into practice. New 2010

guidelines include those for atrial fibrillation, antiplatelets and the heart failure guideline update. Visit [www.ccsguidelineprograms.ca](http://www.ccsguidelineprograms.ca).

### Consensus Statement on the Use of Proton Pump Inhibitors and Thienopyridines

Neena S. Abraham, Mark A. Hlatky, Elliott M. Antman J et al. ACCF/ACG/AHA 2010 expert consensus document on the concomitant use of proton pump inhibitors and thienopyridines: A focused update of the ACCF/ACG/AHA 2008 expert consensus document on reducing the gastrointestinal risks of antiplatelet therapy and NSAID use. *Circulation*, 2010; 122:2619-2633.

### Quality Improvement Resource Room

The Society of Hospital Medicine has a quality improvement (QI) resource room with special sections on Acute Coronary Syndromes (ACS), Heart Failure, Stroke and Glycemic Control. The website provides information on QI basics, QI tools such as patient pathways as well as step by step instructions for reaching breakthrough levels of improvement for inpatient care. Visit the quality improvement section at [www.hospitalmedicine.org](http://www.hospitalmedicine.org).

## Innovative Ideas

### Family Conference Forms

The Nova Scotia Rehabilitation Centre is piloting an innovative new project to facilitate communication for stroke survivors across the continuum of care and between providers and family. The Family Conference Form provides a designated spot to address patient and family goals, and the plan that has been developed to help them achieve those goals. By providing a consistent form, it is thought that providers will be better able to see what the patient's goals are and where they are on the path

to success, particularly during transition points of care, such as from acute care to rehabilitation. If the pilot is successful, this form will be used more widely across the district. The communication tool is helping Capital District Health Authority staff ensure that they are providing truly patient centred care. For more information, please contact Alison McDonald (alison.mcdonald@cdha.nshealth.ca) or Wendy Simpkin (wendy.simpkin@cdha.nshealth.ca).

### South West Health Patient Survey

In February 2010, South West Health (SWH) implemented education packages for patients hospitalized with AMI and unstable angina. Many of these patients were transferred to the QEII for cardiac intervention and returned to their home hospital in SWH. Because of the brief time spent in the QEII, there were few "teachable moments" and patients were returning having received inadequate education. Information packages are not intended to replace teaching but enhance the education delivered to patients. Each patient receives a package with informative materials related to their specific diagnosis, ie., post-angioplasty. In addition, a physician completes a form detailing their medications and follow-up appointments with physician specialists as well as a referral to the CV Clinic. In the Yarmouth Regional Hospital site only, patients are being surveyed post-discharge as they come in for their first appointment with the CV Clinic nurse specialist. Prior to seeing the nurse they are asked to complete a survey with questions intended to provide a measure of how well staff did in the hospital setting in providing education around medications, activity, lifestyle modification, signs and symptoms to watch for, follow-up appointments and an opportunity for feedback. The survey will

run for 6 months—one year. For more information contact Kelly Goudey (kgoudey@swndha.nshealth.ca).

### New Grading System for CCS Clinical Guidelines

The CCS guidelines committee has adopted a new system to evaluate the quality of clinical evidence supporting the various recommendations. The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system is currently used by the American College of Chest Physicians and World Health Organization. The approach qualifies the clinical evidence classifying it as very low, low, moderate, or high and rates its strength as either strong or conditional.

### CONTACT US

Room 539, Bethune Building  
1276 South Park Street  
Halifax, NS B3H 2Y9  
Tel: 902.473.7834  
Fax: 902.425.1752  
cvhns@cdha.nshealth.ca  
www.gov.ns.ca/health/cvhns